Accelerated Clinical Trial Agreement - CRO

This Accelerated Clinical Trial (ACTA) Agreement ("**Agreement**") is made as of the date of the last signature herein(the "**Effective Date**") by and between Oregon Health & Science University, a non-profit, educational, research and healthcare institution ("**Institution**") with an address at 3181 SW Sam Jackson Park Road, Portland, Oregon 97239 and CTI Clinical Trial Services, Inc., an Ohio corporation having its principal place of business at 100 East RiverCenter Boulevard, Covington, KY 41011 ("**CRO**"). CRO and Institution are herein referred to collectively as "Parties." Individually, each of CRO and Institution is a "Party."

WHEREAS, CRO has been engaged by Talaris Pharmaceuticals, Inc. (the "**Sponsor**") to arrange and administer a multi-center clinical trial funded by Sponsor to determine the safety and efficacy of Sponsor's product;

WHEREAS, Institution, Sponsor and CRO have agreed to use the ACTA, to accelerate the process of translating laboratory discoveries into treatments for patients, to engage communities in clinical research efforts, and to train a new generation of clinical and translational researchers;

WHEREAS, Sponsor is a for-profit organization that intends to conduct a sponsored multi-center clinical trial, described in 1.1 below, involving the use of certain diagnostic(s), drug(s), devices(s), or biologic(s) provided by Sponsor and desires that Institution participate in such clinical trial;

WHEREAS, the Institution has appropriate facilities and personnel with the qualification, training, knowledge, and experience necessary to conduct such a clinical trial; and

WHEREAS, the Study contemplated by this Agreement is of interest and benefit to Institution, Sponsor and CRO, and will further the instructional and research objectives of Institution in a manner consistent with its status as a nonprofit educational, research and health care institution;

NOW, THEREFORE, in consideration for the mutual promises made in this Agreement and for valid consideration, the Parties agree as follows:

1. Scope of Agreement

1.1. Institution will undertake a sponsored multi-center clinical trial ("Study") described in the protocol entitled, FCR001A2301 (the "Protocol") entitled: "A 5-year, randomized, controlled, multi-center study to assess the safety and efficacy of FCR001 cell-based therapy relative to tacrolimus plus mycophenolate mofetil in de novo living donor renal transplant recipients, and safety in FCR001 donors" ("**Study**"), which is incorporated herein as **Exhibit A** ("**Protocol**"). Institution will use its reasonable efforts to only recruit subjects in accordance with the Protocol. The Study will be conducted by the Institution under the direction of

Douglas Norman, MD, an employee of Institution ("**Principal Investigator**").

1.2. In the event of any conflict between the terms and conditions of this Agreement and the Protocol or between this Agreement and any of its Exhibits, the terms and conditions of the Protocol shall control with respect to matters of the clinical conduct of the Study, and the terms of this Agreement shall control with respect to all other matters.

1.3. Unless otherwise agreed to by the Parties, Sponsor and/or CRO will provide to Institution on a timely basis, without charge, the required quantities of properly-labeled Sponsor drug(s) or biologics(s) ("**Study Drug**") and/or device(s) ("**Study Device**") and other materials (e.g., Investigator's Brochure, handling and storage instructions, and, if applicable, placebo) necessary for Institution to conduct the Study in accordance with the Protocol. Unless stated otherwise in writing by Sponsor, all such items are and will remain the sole property of Sponsor until administered or dispensed to Study subjects during the course of the Study. Receipt, storage, and handling of Study Drug or Study Device will be in compliance with all applicable laws and regulations, the Protocol, and CRO's or Sponsor's instructions.

1.4. CRO and Institution shall comply with and conduct all aspects of the Study in compliance with all applicable federal, state, and local laws and regulations, including generally accepted standards of good clinical practice as adopted by current FDA regulations and statutes and regulations of the U.S. Government relating to exportation of technical data, computer software, laboratory prototypes, and other commodities as applicable to academic institutions. Institution will only allow individuals who are appropriately trained and qualified to assist in the conduct of the Study.

1.5. Institution shall obtain IRB approval for this Study and proof thereof shall be provided to CRO. Initiation of the Protocol and Institution's obligation to conduct the Study shall not begin until IRB approval is obtained. Institution shall obtain from each subject, prior to the subject's participation in the Study, a signed informed consent and necessary authorization to disclose health information to CRO and/or Sponsor in a form approved in writing by the IRB or a waiver of consent as directed by the IRB and further provided that the informed consent is consistent with Institution's policies.

1.6. Institution shall promptly inform Sponsor of any urgent safety measures as instructed in the Protocol or breaches of the Protocol of which Institution becomes aware.

1.7. Institution acknowledges CRO's right to assign or transfer, in whole or in part, with notice to Institution, any of its rights or obligations under this Agreement to the Sponsor or Sponsor's designate.

2. Payments

Sponsor will provide financial support for the Study and will provide such funds to CRO who will pay Institution in accordance with the budget attached as **Exhibit B** ("Budget") on a prorated basis, according to the actual work completed and any non-cancelable obligated expenses, for subjects who are enrolled into the Study. The Parties acknowledge that the

Budget amounts represent an equitable exchange for the conduct of the Study in light of the professional time and expenses required for the performance of the Study.

In addition to other necessary routing information detailed in Exhibit B, each payment shall clearly reference the: Study Protocol Number and PI name.

For administrative convenience, various Study contact information may be attached hereto and incorporated by reference as **Exhibit C**, entitled, "Administrative & Study Points of Contact**."**

The Institution's tax identification number is: 93-1176109.

3. Confidentiality

3.1. It is anticipated that in the performance of this Agreement, Sponsor and/or CRO on behalf of Sponsor may need to disclose to Institution information which is considered confidential. The rights and obligations of the Parties with respect to such information are as follows:

"Confidential Information" refers to information of any kind which is disclosed to the Institution by
Sponsor and/or CRO on behalf of Sponsor for purposes of conducting the Study or Data (as defined below in Section 4) which:

a) by appropriate marking, is identified as confidential and proprietary at the time of disclosure; or

b) if disclosed orally, is identified in a marked writing within thirty (30) days as being confidential.

Sponsor and/or CRO on behalf of Sponsor will make reasonable efforts to mark Confidential Information as stated in (a) and (b) above. However, to the extent such marking is not practicable, then in the absence of written markings, information disclosed (written or verbal) that a reasonable person familiar with the Study would consider it to be confidential or proprietary from the context or circumstances of disclosure shall be deemed as such. Notwithstanding the foregoing, Data and results generated in the course of conducting the Study are not Confidential Information for publishing purposes in accordance with Section 9 of this Agreement.

Institution agrees, for a period of five (5) years following the termination or expiration of this Agreement, to use reasonable efforts, no less than the protection given their own confidential information, to use Confidential Information received from Sponsor and/or CRO on behalf of Sponsor in accordance with this Section.

Institution agrees to use Sponsor's Confidential Information solely as allowed by this Agreement, and for the purposes of conducting the Study. Institution agrees to make Sponsor's Confidential Information available only to those of its, or its affiliated hospitals'

employees, IRB members, personnel, agents, consultants, and vendors, and approved subcontractors, as applicable, who require access to it in the performance of this Study, and are subject to similar terms of confidentiality.

3.2. The obligation of nondisclosure does not apply with respect to any of the Confidential Information that:

a) is or becomes public knowledge through no breach of this Agreement by Institution;

b) is disclosed to Institution by a third party entitled to disclose such information without known obligation of confidentiality;

c) is already known or is independently developed by Institution without use of Sponsor's Confidential Information as shown by Institution's contemporaneous written records;

d) is necessary to obtain IRB approval of Study or required to be included in the written information summary provided to Study subject(s) and/or informed consent form;

e) is released with the prior written consent of the Sponsor; or

f) is required to support the medical care of a Study Subject.

3.3. Institution may disclose Confidential Information to the extent that it is required to be produced pursuant to a requirement of applicable law, IRB, government agency, an order of a court of competent jurisdiction, or a facially valid administrative, Congressional, or other subpoena, provided that Institution, subject to the requirement, order, or subpoena, promptly notifies Sponsor. To the extent allowed under applicable law, Sponsor may seek to limit the scope of such disclosure and/or seek to obtain a protective order. Institution will disclose only the minimum amount of Confidential Information necessary to comply with law or court order as advised by Institution's legal counsel.

3.4. No license or other right is created or granted hereby, except the specific right to conduct the Study as set forth by Protocol and under terms of this Agreement, nor shall any license or other right with respect to the subject matter hereof be created or granted except by the prior written agreement of the Parties duly signed by their authorized representatives.

3.5. Upon Sponsor's and/or CRO's written request, Institution agrees to return all Confidential Information supplied to it by Sponsor and/or CRO on behalf of Sponsor at Sponsor's expense pursuant to this Agreement except that Institution may retain such Confidential Information in a secure location for purposes of identifying and satisfying its obligations and exercising its rights under this Agreement.

3.6 Institution may disclose the existence of this Agreement and any additional information necessary to ensure compliance with applicable Federal, State, and Institutional policies, regulations, and laws.

4. Data Use/Ownership

"Data" shall mean all data and information generated by Institution as a result of conducting the Study in accordance with the IRB approved Protocol. Data does not include original Study subject or patient medical records, research notebooks, source documents, or other routine internal documents kept in the Institution's ordinary course of business operations, which shall remain the sole and exclusive property of the Institution or medical provider. Sponsor owns and has the right to use the Data in accordance with the signed informed consent and authorization form, applicable laws, and the terms of this Agreement. Notwithstanding any licenses or other rights granted to Sponsor herein, but in accordance with the confidentiality and publication sections herein, Institution shall retain the right to use the Data and results for its publication, IRB, regulatory, legal, clinical, educational, and internal research purposes.

5. HIPAA/HIPAA Privacy

5.1. Institution shall comply with applicable laws and regulations, as amended from time to time, including without limitation, the Health Insurance Portability and Accountability Act of 1996 and its implementing regulations (HIPAA) with respect to the collection, use, storage, and disclosure of Protected Health Information (PHI) as defined in HIPAA. CRO and Sponsor through its agreement with CRO, shall collect, use, store, access, and disclose PHI collected from Study subjects only as permitted by the IRB approved informed consent form or HIPAA authorization form obtained from a Study subject. Sponsor will collect, use, store, and disclose any Subject Material, defined in Section 15, it receives only in accordance with the informed consent form and, in any event, will not collect, use, store, or disclose any PHI attached to or contained within the Subject Material in any manner that would violate this Section of the Agreement.

Institution acknowledges that, pursuant to Section 111 of the Medicare, Medicaid, and SCHIP Extension Act of 2007 ("MMSEA"), Sponsor has an obligation to submit certain reports to the Centers for Medicare & Medicaid Services with respect to Medicare beneficiaries who participate in the Study and experience a research injury for which diagnosis or treatment costs are incurred. Sponsor and CRO recognize that each party is subject to laws and regulations protecting the confidentiality of research subject information. Accordingly: (1) Institution agrees upon prior written request to provide to Sponsor, or CRO as designated by Sponsor, certain identifiable patient information required by MMSEA for Study subjects who are Medicare beneficiaries and incur medical costs in association with a research injury and whose costs are reimbursed by Sponsor pursuant to this Agreement; and (2) Institution further agrees to otherwise cooperate with Sponsor (and CRO as designated by Sponsor) to the extent necessary for Sponsor to meet its MMSEA reporting obligations.

5.2. CRO's ability to review the Study subjects' Study-related information contained in the Study subject's medical record shall be subject to reasonable safeguards for the protection of Study subject confidentiality and the Study subjects' informed consent form or HIPAA authorization form.

5.3. Neither CRO, nor Sponsor through its agreement with CRO, shall attempt to identify, or contact, any Study subject unless permitted by the informed consent form.

6. Record Retention

As applicable by law, Institution shall retain and preserve a copy of the Study records for the longer of:

a) two (2) years after a marketing authorization for Study Drug, or Study Device has been approved for the indication for which it was investigated or Sponsor has discontinued research on the Study Drug or Study Device;

b) such longer period as required by federal regulatory requirements; or c) as requested by Sponsor at Sponsor's reasonable storage expense.

7. Monitoring and Auditing

7.1. Site visits by Sponsor, CRO and/or another authorized designee (e.g., Study monitor) will be scheduled in advance for times mutually acceptable to the Parties during normal business hours. Sponsor's, CRO's and/or authorized designee's access is subject to reasonable safeguards to ensure confidentiality of medical records and systems.

7.2. Upon becoming aware of an audit or investigation by a regulatory agency with jurisdiction over the Study, Institution agrees to provide Sponsor with prompt notice of the auditor investigation. If legally permissible or allowable by the regulatory agency and permissible in accordance with the Institution's policy, Sponsor may be available or request to be present with approval from auditor during such audit, but Sponsor will not alter or interfere with any documentation or practice of Institution. Institution shall be free to respond to any regulatory agency inquiries and will provide Sponsor with a copy of any formal response or documentation to the regulatory agency regarding the Study.

8. Inventions, Discoveries and Patents

8.1. It is recognized and understood that certain existing inventions and technologies, and those arising outside of the research conducted under this Agreement, are the separate property of Sponsor or Institution and are not affected by this Agreement, and neither Sponsor nor Institution shall have any claims to or rights in such separate inventions and technologies.

8.2. Any new patentable inventions, developments, or discoveries made during and in the performance
of the Study ("Inventions") shall be promptly disclosed to Sponsor. Title to Inventions that necessarily use or necessarily incorporate Sponsor's Study Drug and/or Study Device shall reside with Sponsor ("Sponsor Inventions"). Institution shall assign all Sponsor Inventions to Sponsor in writing. Title to Inventions other than Sponsor Inventions ("Other Inventions") shall reside with Sponsor if Sponsor personnel are the sole inventors, with Institution if Institution personnel are the sole inventors, and shall be held jointly if both Institution and Sponsor personnel are inventors. Institution's obligations under Sections 8.2 and 8.3 hereunder shall be performed by its appropriate office with technology transfer responsibilities, if required by and in accordance with Institution policies.

8.3. To the extent that Institution owns sole or joint title in any such Other Inventions, Sponsor is hereby granted, without option fee other than consideration of the Study sponsored herein and the reimbursement to Institution for patent expenses incurred prior to or during the option period, an option to acquire an exclusive, worldwide, royalty-bearing license to Institution's rights to any Other Invention, which option shall extend for no more than ninety (90) days after Sponsor's receipt of an Invention disclosure from Institution ("Option Period"). Sponsor and Institution shall use their reasonable efforts to negotiate, for a period not to exceed ninety (90) days after Sponsor's exercise of such option, a license agreement satisfactory to both parties ("Negotiation Period"). In the event Sponsor fails to exercise its option within the Option Period, or Sponsor and Institution fail to reach agreement on the terms of such license within the Negotiation Period, Institution shall have no further obligation to Sponsor under this Agreement with regard to the specific Other Invention.

8.4. Institution shall retain a royalty-free, irrevocable license to use for its own internal noncommercial research, educational and patient care purposes, all Sponsor Inventions or Other Inventions licensed or assigned to Sponsor hereunder.

8.5. Nothing contained in this Agreement shall be deemed to grant either directly by implication, estoppel, or otherwise any license under any patents, patent applications, or other proprietary interest to any other inventions, discovery or improvement of either Sponsor or Institution.

8.6. CRO and Institution agree that the provisions of this Agreement are intended to be interpreted and implemented so as to comply with all applicable federal laws, rules, and regulations, including without limitation the requirements of Rev. Proc. 2007-47; provided, however, if it is determined by the Internal Revenue Service or any other federal agency or instrumentality (the "Government") that the provisions of this Agreement are not in such compliance, then those parties agree to modify the provisions and the implementation of this Agreement so as to be in compliance with all applicable federal laws, rules, and regulations as determined by the Government.

9. Publication

9.1. Institution shall be free to publish, present, or use any Data and results arising out of its performance of the Protocol (individually, a "Publication"). At least thirty (30) days prior to submission for Publication, Institution shall submit to Sponsor for review and comment any proposed oral or written Publication ("Review Period"). Institution will consider any such comments in good faith but is under no obligation to incorporate Sponsor's suggestions. The Review Period for abstracts or poster presentations shall be thirty (30) days. If during the Review Period, Sponsor notifies Institution in writing that: (i) it desires patent applications to be filed on any inventions disclosed or contained in the disclosures, Institution will defer Publication for a period not to exceed sixty (60) days, to permit Sponsor to file any desired patent applications; and (ii) if the Publication contains Sponsor's Confidential Information as defined in Section 3 and Sponsor requests Institution in writing to delete such Sponsor's Confidential Information, the Institution agrees to delete such Sponsor's Confidential Information only to the extent such deletion does not preclude the complete and

accurate presentation and interpretation of the Study results.

9.2. The Parties agree that this Study is a multi-center clinical trial. Therefore, Institution agrees that the first Publication of the results of the Study shall be made in conjunction with the presentation of a joint multi-center Publication of the Study results with the Principal Investigators from all sites contributing Data, analyses, and comments. However, Institution may publish the Data and Study results individually in accordance with this Section 9 upon first occurrence of one of the following: (i) multi-center Publication is published; (ii) no multi-center publication is submitted within eighteen (18) months after conclusion, abandonment, or termination of the Study at all sites; or (iii) Sponsor confirms in writing there will be no multi-center Publication.

9.3. If no multi-center Publication occurs within eighteen (18) months of the completion of the Study
at all sites, upon request by Institution, Sponsor will provide such Institution access to the aggregate Data from all Study sites.

9.4. If the Institution, through its Principal Investigator, is identified to participate in the multi-center Publication: (i) Institution will have the opportunity to review the aggregate multi-center Data, upon request; and (ii) consistent with the International Committee of Medical Journal Editors (ICMJE) regulations, Institution will have adequate opportunity to review and provide input on any abstract or manuscript prior to its submission for Publication. Institution also retains the right, on behalf of its Principal Investigator, to decline to be an author on any Publication.

10. Use of Name

10.1. Neither Institution nor CRO may use the name, trademark, logo, symbol, or other image or trade name of the other Party or their employees and agents in any advertisement, promotion, or other form of publicity or news release or that in any way implies endorsement without the prior written consent of an authorized representative of the other Party whose name is being used. Such approval will not be unreasonably withheld.

10.2. Institution and Sponsor understand that the amount of any payment made hereunder may be disclosed and made public by the other party as required by law or regulation, including the Patient Protection and Affordable Care Act of 2010, provided that the disclosure clearly designates the payment as having been made to Institution for research and not to the physician.

10.3. Institution may acknowledge the Sponsor's support, including but not limited to financial support as may be required by academic journals, professional societies, funding agencies, and applicable regulations. Notwithstanding anything to the contrary in this Agreement, Institution may publicly post information about the Study on Institution's clinical trials directory/website. Additionally, notwithstanding anything herein to the contrary, Institution shall have the right to post Sponsor's and/or CRO's names, the Study title, and the Study period, and funding amount, on Institution publicly accessible lists of research

conducted by the Institution.

11. Indemnification and Limitation of Liability

11.1 Sponsor's indemnification obligations are outlined in a separate Letter of Indemnification, attached hereto as **Exhibit D**.

11.2. CRO expressly disclaims any liability in connection with the Study Drug or Study Device, including any liability for any claim arising out of a condition caused by or allegedly caused by any Study procedures associated with such product except to the extent that such liability is caused by the negligence, willful misconduct or breach of this Agreement by CRO.

11.3. Institution shall have no obligation to indemnify CRO and CRO shall have no obligation to indemnify Institution.

12. Subject Injury

Sponsor's subject injury obligations are outlined in **Exhibit D**.

13. Insurance

13.1. Institution shall, at its sole cost and expense maintain a policy or program of insurance or self- insurance at the level of at least $1,000,000 per occurrence (or per claim) and $3,000,000 annual aggregate to support its obligations assumed in this Agreement. However, if Institution is a public entity entitled to governmental immunity protections under applicable state law, then Institution may provide liability coverage in accordance with any limitations associated with the applicable law.

13.2. CRO shall maintain an insurance policy or a program of self-insurance at levels sufficient to support its obligations assumed herein.

13.3. Upon written request, either Party will provide evidence of its insurance or self-insurance acceptable to the other Party. A Party's inability to meet its insurance obligation constitutes material breach of this Agreement.

14. Term and Termination

14.1. This term of this Agreement shall commence upon the Effective Date and terminate upon the completion of the Parties' Study-related activities under the Agreement, unless terminated early as further described in this Section.

14.2. CRO has the right to terminate this Agreement upon thirty (30) days prior written notice to the Institution. This Agreement may be terminated immediately at any time for any reason by the Institution or CRO when, in their judgment or that of the Principal Investigator, the Institution's IRB, Scientific Review Committee, if applicable, or the Food and Drug Administration, it is determined to be inappropriate, impractical, or inadvisable to continue, in order to protect the Study subjects' rights, welfare, and safety, or the IRB otherwise disapproves the Study. If for any reason Principal Investigator becomes unavailable to direct

the performance of the work under this Agreement, Institution shall promptly notify CRO. If the Parties are unable to identify a mutually acceptable successor, this Agreement may be terminated by either Party upon thirty (30) days written notice.

14.3. Notwithstanding the above a Party may, in addition to any other available remedies:

a) immediately terminate this Agreement upon the other Party's material failure to adhere to the Protocol, except for deviation required to protect the rights, safety, and welfare of Study subjects; and/or

b) terminate this Agreement upon the other Party's material default or breach of this Agreement, provided that the defaulting/breaching Party fails to remedy such material default, breach, or failure to adhere to the Protocol within thirty (30) business days after written notice thereof.

14.4. In addition to the above, this Agreement may be terminated by Institution in the event of a material default or breach of this Agreement by CRO, or by CRO in the event of a material breach of this Agreement by Institution, provided that the defaulting/breaching party fails to remedy such material default or breach within thirty (30) business days after written notice thereof.

14.5. In the event that this Agreement is terminated prior to completion of the Study, for any reason, Institution shall:

a) notify the IRB that the Study has been terminated;

b) cease enrolling subjects in the Study;

c) cease treating Study subjects under the Protocol as directed by CRO to the extent medically permissible and appropriate;

d) terminate, as soon as practicable, all other Study activities; and

e) furnish to CRO any required final report for the Study in the form reasonably acceptable to CRO.

Promptly following any such termination, Institution will provide to CRO copies of Data collected pursuant to the Study Protocol. Upon Sponsor's or CRO's written request, Institution shall provide to the requesting party, at Sponsor's or CRO's expense, all Sponsor's Confidential Information provided under this Agreement provided, however, that Institution may retain such copy of Confidential Information for record keeping purposes, monitoring its obligations, and exercising its rights hereunder, subject to Institution's ongoing compliance with the confidentiality and non-use obligations set forth in this Agreement.

14.6. If this Study is terminated early by either Party, the Institution shall be reimbursed for all work completed, on a pro rata basis, and reasonable costs of bringing the Study to termination incurred through the date of termination, and for non-cancelable commitments properly incurred through that date. Upon receipt of notice of termination, Institution will use reasonable efforts to reduce or eliminate further costs and expenses and will cooperate

with CRO to provide for an orderly wind-down of the Study.

14.7. Subsections 1.4, 1.6, and 14.6, and Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 (and the attached Letter of Indemnification), 12, 13, 15, 19 and 23, shall survive any termination or expiration of this Agreement, except that Section 3 shall survive for the period stated in Section 3.1. Any provision of this Agreement that by its nature and intent remains valid after termination will survive termination.

15. Subject Material

15.1. Subject Material means any biologic material of human origin including, without limitation, tissues, blood, plasma, urine, spinal fluid, or other fluids derived from the Study subjects in accordance with and pursuant to the Protocol ("**Subject Material**").

15.2. Institution agrees to make the Subject Material available to the Sponsor in accordance with the Protocol for the purposes of the Study. The Subject Material may be used by the Sponsor, central lab, or other contracted party only as allowed by the Study subject's informed consent form or pertinent institutional review board(s). Sponsor's use of Subject Materials, other than as allowed by the Study subject's informed consent form, will require additional IRB review and approval.

16. Subcontract

If applicable, Institution has the right to subcontract to other sites to conduct the Study in accordance with the Protocol with terms consistent with this Agreement with written approval of the Sponsor, which approval shall not be unreasonably withheld. If Institution subcontracts any Study related duties, Institution shall contract with such subcontractors incorporating terms substantially similar to the terms herein. Such subcontracts may be provided to the CRO upon written request.

The Parties acknowledge and agree that the Sponsor and each of its affiliates is a third party beneficiary to this Agreement.

17. Notices

Any notice, authorization, approval, consent or other communication will be in writing and deemed given:
a. Upon delivery in person;
b. Upon delivery by courier;
c. Upon delivery date by a nationally-recognized overnight delivery service such as FedEx.

If to CRO:
CTI Clinical Trial Services, Inc.
100 East RiverCenter Boulevard
Covington, KY 41011
(513) 598-9290
ATTN: Corporate Counsel
jmeisenhelder@ctifacts.com

If to Sponsor:
Talaris Therapuetics, Inc.
201 East Jefferson Street, Suite 110B
Louisville, KY 40202
ATTN: Nancy Krieger, Chief Medical Office
Nancy.Krieger@talaristx.com

If to Institution:
For Administrative Matters:
Oregon Health & Science University
Attn: Clinical Trials Office - Contracting
3181 SW Sam Jackson Park Road, MC: SN4N
Portland, Oregon 97239

For Technical Matters:
Oregon Health & Science University
Attn: Douglas Norman, MD
2611 SW 3rd, MC: MQ360
Portland, Oregon 97201

For Legal Matters:
Oregon Health & Science University
Attn: Office of General Counsel
3181 SW Sam Jackson Park Road, MC: L585
Portland, Oregon 97239

18. Independent Contractor

It is mutually understood and agreed that the relationship between Institution and CRO is that of independent contractors. No party shall represent itself as the agent, employee, partner, joint venturer, or servant of the other. Except as specifically set forth herein, no party shall have nor exercise any control or direction over the methods by which the other party performs work or obligations under this Agreement. Further, nothing in this Agreement is intended to create any partnership, joint ventures, lease, or equity relationship, expressly or by implication, among those parties.

19. Clinical Trial Registry

Prior to enrollment of the first subject in the Study, Sponsor will register the Study on www.clinicaltrials.gov in accordance with the requirements of the International Committee of Medical Journal Editors (ICMJE) and Public Law 110-85. Results of this Study will be reported in compliance with applicable laws.

20. Non-Referral/Anti-Corruption Language

20.1. Institution and CRO, on behalf of Sponsor, agree that it is not their intent under this Agreement to induce or encourage the unlawful referral of subjects or business between the Parties, and there shall not be any requirement under this Agreement that those parties, their employees or affiliates, including their medical staff, engage in any unlawful referral of subjects to, or order or purchase products or services from, one of those parties.

20.2. Institution and CRO, on behalf of Sponsor, agree that their employees, who are involved in the conduct of the Study, will not offer, pay, request or accept any bribe, inducement, kickback or facilitation payment, and shall not make or cause another to make any offer or payment to any individual or entity for the purpose of influencing a decision for the benefit of one of those parties.

21. Force Majeure

If either Party hereto shall be delayed or hindered in, or prevented from, the performance of any act required hereunder for any reason beyond such Party's direct control, including but not limited to, strike, lockouts, labor troubles, governmental or judicial actions or orders, riots, insurrections, war, acts of God, inclement weather, or other reason beyond the Party's control (a "Disability") then such Party's performance shall be excused for the period of the Disability. Any Study timelines affected by a Disability shall be extended for a period equal to the delay and any affected Budget shall be adjusted to account for cost increases or decreases resulting from the Disability. The Party affected by the Disability shall notify the other Party of such Disability as provided for herein.

22. Counterparts

This Agreement may be executed in any number of counterparts, each of which shall be an original and all of which together shall constitute one and the same document, and is binding on all Parties notwithstanding that each of the Parties may have signed different counterparts. Facsimiles or scanned copies of signatures or electronic images of signatures shall be considered original signature unless prohibited by applicable law.

23. Debarment

The Institution certifies that to its knowledge neither it, nor any of its employees, agents or other persons performing the Study under its direction, is currently debarred, suspended, or excluded under the Federal Food, Drug and Cosmetic Act, as amended, or disqualified under the provisions of 21 CFR §312.70. In the event that the Principal Investigator or any Study personnel becomes debarred or disqualified during the term of this Agreement or within 1 year after termination of the Study, the Institution agrees to promptly notify CRO after learning of such event. Institution certifies that it is not excluded from a federal health care program, including Medicare and Medicaid. In the event an Institution becomes excluded during the term of this Agreement or within 1 year after termination of the Study, the Institution agrees to promptly notify CRO after learning of such event.

24. Choice of Law –Intentionally omitted

25. Entire Agreement

Section and clause headings are used herein solely for convenience of reference and are not intended as substantive parts of the Parties' agreement. This ACTA incorporates the Exhibits referenced herein. This written ACTA constitutes the entire agreement between the Parties concerning the subject matter, and supersedes all other or prior agreements or understandings, whether written or oral, with respect to that subject matter. Any changes made to the terms, conditions or amounts cited in this ACTA require the written approval of each Party's authorized representative.

[Signature page to follow]

The authorized representatives of the Parties have signed this ACTA as set forth below.

Oregon Health & Science University

By: Kristen Baptiste Digitally signed by Kristen Baptiste Date: 2020.12.18 15:57:37 -08'00'
Kristen Baptiste, JD
Manager – Clinical Trials Office, Contracting
Date: 18DEC2020

CTI Clinical Trial Services, Inc.

By: DocuSigned by: Timothy J. Schroder 5B37C733FB3B45D...
Timothy J. Schroder
CEO
Date: 21-Dec-2020 | 11:44:52 EST

READ AND ACKNOWLEDGED

By: Douglas J. Norman Digitally signed by Douglas J. Norman Date: 2020.12.18 15:08:11 -08'00'
Douglas Norman, MD
Principal Investigator

EXHIBIT A
PROTOCOL

Clinical Trial Protocol FCR001A2301

A randomized, controlled, multi-center, safety and efficacy study of FCR001 cell-based therapy relative to a tacrolimus and mycophenolate-based regimen in de novo living donor renal transplant recipients, and safety in FCR001 donors

(the FREEDOM-1 study)

Document type:	Clinical Trial Protocol
EUDRACT number:	2016-002155-22
IND number:	16834
Version number:	V002
Clinical trial phase:	3
Release date:	14-APR-2019

SIGNATURE PAGE

Sponsor's Approval

The protocol has been approved by Talaris.

Responsible Medical Officer: Nancy Krieger, MD, Chief Medical Officer

Sponsor's Authorized Officer:

	14 April 2019
Company/Sponsor signatory	Date

EXHIBIT B
PAYMENT SCHEDULE AND BUDGET

A. Within 45 days of the occurrence of all the following: (i) full execution of this Agreement, (ii) IRB approval, (iii) Study start-up and (iv) receipt of invoice, CRO will pay to the Payee identified below the one-time, non-refundable fees per attached Exhibit 3 (hereinafter "Study Budget").

B. Thereafter, CRO or Sponsor will pay institution on a quarterly basis (within 45 days of the end of the calendar quarter) for completed study procedures according to the agreed Study Budget and according to CRFs completed. 10% of all quarterly payments will be held, and payment of the held sum will be made within 30 days of submission of all monitored CRFs with no outstanding data queries. Overhead will be paid on listed items according to the agreed budget.

C. The following criteria must be met for the payments set forth in Section B to be made:

i. patients meet eligibility criteria as specified in the Protocol.
ii. patients treated according to the Protocol.
iii. required CRFs are accurately completed, monitored, and retrieved by CRO.
iv. Data is considered complete and acceptable by CRO.

D. Payment for patients who have incomplete/missed visit(s), or who have not completed the Study, will be made on a prorated basis.

E. Within 45 days of receipt of appropriate documentation and an invoice, CRO will reimburse Payee for invoiceable fees listed per the attached Exhibit 3, including all applicable IRB Fees.

F. Other than Per Study Subject Fee milestone payments, the CRO must receive an invoice from Institution before any payment will be processed.

All invoices shall be addressed and sent to:

CTI Clinical Trial Services, Inc.
100 E. RiverCenter Blvd.
Covington, KY 41011
Attn: Accounts Payable
Email: apayable@ctifacts.com

CRO will make all payments to the payee listed below electronically, rather than by check sent via US mail. Payments will be deposited into the account of your choice. In addition to having the money deposited electronically, Institution will also be notified of the deposit by e-mail. The e-mail will provide Institution with all the information that would normally be on your check stub. To receive payments electronically, Institution must complete the information below. A completed W-9 is required of payee before any payment may be made. Please send the completed signed W-9 to apayable@ctifacts.com Any change in the payee or payee information below should be documented by Institution and forwarded to CRO as notice per Section 17.

Payee Information		
Payee Name:	OHSU	Protocol# FCR001A2301
		PI Name: Douglas Norman, MD
Payee Remit to Address:	Institution/Division/Dept.: Office of Proposal & Award Management	
	Street Address: PO Box 3003	
	City, State, Zip: Portland, OR 97208-3003	
Tax ID#:	93-1176109	

Bank Information	
Bank Name:	US Bank
Name on Account:	OHSU General Account
Account Type:	Checking
Account Number:	153910681219
ABA or Routing Transit Number for ACH:	123000848

Payment Notification E-mail Address:	spacash@ohsu.edu
Payee Contact Phone Number:	503-494-0317
Name(s): *Please print*	Elizabeth B. Williams

SITE FEES - STARTUP (INCLUDING OH WHERE APPLICABLE)	
Administrative Startup	$13,965.00
Operational Startup	$10,000.00
Cell Therapy Lab Director Fee	$1,330.00
Cell Therapy Lab Facility Fee	$665.00
Cell Therapy Lab Fee for Training (for full team)	$1,330.00
IRB Initial Review	$3,000.00
Pharmacy Startup Fee	$1,000.00
CTRC Administrative Fee	$798.00
CTRC Nursing Startup Fee	$798.00
CTRC Core Lab Startup Fee	$532.00

INVOICEABLE SITE FEES (INCLUDING OH WHERE APPLICABLE)	
Cell Therapy Lab Chain-of-Custody, per patient	$200.00
LN2 Storage Fee, per month, per patient	$133.00
IND Reports	$66.50
IRB Continuing Review Administrative Fee	$931.00
IRB Modification Administrative Fee	$665.00
IRB Continuing Review Fee (Full Board IRB Continuing Review)	$2,200.00
IRB Annual Maintenance Fee (Non-full Board IRB Continuing Review)	$1,700.00
Pharmacy monthly maintenance Fee	$266.00
Pharmacy monthly maintenance Fee (ea. additional drug)	$66.50
Site FDA/Sponsor Audit Fee (for Not-for-cause audits	$1,995.00
Site Specific SAE Report, per report	$266.00
Budget Amendment Fee (for sponsor-initiated budget amendments)	$665.00
Sponsor required Conference Calls/Webinars - Investigator or Sub-Investigator Fee	$207.50 (Covers 0.5 hour of PI and study coordinator time plus OH)

CLOSE-OUT FEES (INCLUDING OH WHERE APPLICABLE)	
Pharmacy Close-out Fee	$332.50
Study Close-out Fee	$2,000.00
Document Archiving Fee	$500.00

PATIENT TOTALS	
FCR-R	$167,377.84
FCR-D	$21,530.04
CTR-R	$33,750.08
CTR-D	$1,457.68

RECIPIENT FCR-R

STUDY PROCEDURES / EVALUATIONS	Unit Cost	Screening	BMT Screening (within 30 days of transplant)	Mobilization & Apheresis: M-D1	M-D2	M-D3	M-D4	M-D5 (M-EoP) M/A	Conditioning & Irradiation: Day -4	Day -3	Day -2	Day -1	Day 0-TX	Day 1	Day 3	Week 1	Week 2[a]	Week 3[a]	Week 4	Supportive care Post Discharge[a] (invoice)	Month 2	Month 3	Month 4	Month 5	Month 6	Month 9	Month 12	Month 15	Month 18	Month 24	Month 30	Month 36	Month 42	Month 48	Month 54	Month 60
Medical History/Demographics	X	X																																		
Informed Consent	X	X																																		
Inclusion/Exclusion	X	X																																		
Physical Exam (Initial - Nephrology)	$448	$448																																		
Physical Exam Follow-up - Nephrology)	$228																									$228			$228		$228				$228
BMT Evaluation - Initial	Invoice	Invoice																																		
Radiation Oncology Evaluation - Initial	Invoice	Invoice																																		
Vital Signs (performed by study RN)	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ECG	$150	$150											$150						$150											$150						
Chest X-ray	$275			Invoice					Invoice																												
Pulmonary Function Tests (Spirometry & DLCO) (Required for local BMT Workup)	Invoice	Invoice																																		
Serum Pregnancy Test (local)	$77	Invoice						Invoice														Invoice			Invoice	Invoice	Invoice			Invoice		Invoice			Invoice
Urine Pregnancy Test (local)	$25	Invoice						Invoice														Invoice			Invoice	Invoice	Invoice			Invoice		Invoice			Invoice
Venipuncture (performed by study RN)	X	X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Blood collection from VAD	$293	X						$293	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Central Lab:	X	X							X		X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Safety Labs																																				
Cytokine Panel														X		X																				
Immunoglobulins																																				
Central DSA																																				
HAMA Sample																																				
T/B Cell Repertoire/Phenotyping																																				
Vaccine Antibody Titers				X																																
Unholy Biomarkers																																				
Donor Chimerism				X																																
Blood Biomarkers																																				
Central Lab Processing & Shipping	$68	$68							$68		$68	$68	$63	$68	$68	$63	$68	$63	$63		$63	$63	$68	$63	$63	$68	$68	$63	$63	$63	$63	$63	$63	$63	$63	$63
Local Labs:																																				
Blood Group & HLA Typing	$875	SOC/Invoice																																		
ABO/Rh Typing	$83																										$83							$83		
Viral Serology (HIV, Hep A,B,C, CMV, Infectious Disease Panel, EBV Panel)	$2,208		$2,208																																	
Safety Labs (CBC w/diff, comprehensive metabolic set, uric acid, phosphorus, LDH, direct bilirubin, lipid panel)	$438		$438																																	
APPT & INR	$70		$70					$70																												
CD34 Count and Product	$310			$310			$310	$310																												
Fibrinogen Level Quantitative	$25						$25																													
Tacrolimus Levels	SOC										SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC	SOC
CBC w/Diff	$85																			$85																
Comp Metabolic Set	$63																			$63																
Magnesium	$31																			$31																
Medications/Apheresis Medications	Invoice			Invoice	Invoice	Invoice	Invoice	Invoice																												
Apheresis	$5,792							$5,792																												
Cellular Therapy Lab Storage Fees	$6,698							$6,698																												
Cellular Therapy Lab Preparation/Thaw Fees	$723													$723																						
IJ Line Placement	$3,122			Invoice					$3,122																												
Inpatient Admission (Room charge)	$2,040								$2,040	$2,040	$2,040	$2,040					$4,280	Invoice																			
Conditioning Medication Administration	$998								$998	$998	$998				$998																						
Conditioning Medications	Invoice								Invoice	Invoice	Invoice				Invoice																						
Hemodialysis (inpatient, up to 4 hours)	$655								$655	$655	$655		Invoice as needed																								
Hemodialysis (outpatient)	$1,684																		SOC/Invoice as needed																	
Total Body Irradiation	$13,164											$13,164																								
Kidney Transplant Procedure	SOC												SOC																								
FCR001 Infusion	$768													$768																						
Perioperative & Post-operative Medications	Invoice												Invoice	Invoice	Invoice	Invoice	Invoice	Invoice	Invoice		Invoice	Invoice	Invoice	Invoice	Invoice	Invoice	Invoice									
Kidney Allograft Biopsy[c]	$3,585												SOC/Invoice as needed												$3,585		SOC			$3,585		$3,585			$3,585
QxHD Assessment	$448																$448	$448	$448	$448	$448	$448	$448	$448	$448	$448	$448	$448	$448	$448	$448	$448	$448	$448	$448	$448
Research Pharmacy Dispensing Fee (immunosuppressive drugs)	$24										$24	$24	$24	$24	$24	$24	$24	$24	$24		$24	$24	$24	$24	$24	$24	$24	Invoice	Invoice	Invoice	Invoice	Invoice	Invoice	Invoice	Invoice	Invoice
Immunosuppresive drugs (provided by sponsor)																																				
Filgrastim Administration (sub-cutaneous injection)	$135			Invoice	Invoice	Invoice	Invoice	Invoice																												
Adverse Events																																				
Concomitant Medications																																				
Vaccines	Invoice																																			
PI Oversight	$250	$250		$125	$125	$125	$125	$125	$125	$125	$125	$125	$125	$125	$125	$250	$250	$250	$250	$125	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250
Data Entry Fee	$120	$180	$300	$120	$60	$60	$60	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120
Visit Subtotal		$1,096	$2,836	$555	$185	$185	$520	$13,408	$7,124	$3,958	$4,026	$15,541	$487	$1,828	$1,331	$910	$15,190	$910	$1,060	$872	$910	$910	$910	$910	$4,495	$910	$1,221	$886	$886	$4,849	$886	$4,849	$886	$969	$886	$4,699
Institutional Overhead (28%) - OHSU		$307	$794	$155	$52	$52	$146	$3,754	$1,995	$1,108	$1,127	$4,351	$136	$512	$373	$255	$4,253	$255	$297	$244	$255	$255	$255	$255	$1,259	$255	$342	$248	$248	$1,358	$248	$1,358	$248	$271	$248	$1,316
Divisional Assessment (5%) - Nephrology OH		$55	$142	$28	$9	$9	$26	$670	$356	$198	$201	$777	$24	$91	$67	$46	$760	$46	$53	$44	$46	$46	$46	$46	$225	$46	$61	$44	$44	$242	$44	$242	$44	$48	$44	$235
Visit Total		1,457.98	3,771.88	738.15	246.05	246.05	691.60	17,832.64	9,474.92	5,264.14	5,354.38	20,669.53	647.71	2,431.24	1,770.23	1,210.30	20,202.70	1,210.30	1,409.89	1,159.79	1,210.30	1,210.30	1,210.30	1,210.30	5,978.35	1,210.30	1,623.98	1,178.38	1,178.38	6,449.17	1,178.38	6,449.17	1,178.38	1,288.77	1,178.38	6,249.67
TOTAL PER PATIENT	135,771.72																																			

[a] *Supportive care visits will occur 2x per week following discharge from hospital up to 90 days post discharge. Sponsor will be invoiced per visit. Some visits may overlap with protocol required visits.*

[b] *Kidney transplant patients on average spend 7 days in hospital post-transplant. BMT patients spend on average 12-22 days in the hospital post-transplant. The extended hospital day beyond 7 days will need to be covered by the research study.*

[c] *Kidney biopsies will be performed per investigator discretion immediately following the transplant. It is expected most will be SOC.*

Invoiceable Patient Costs	Cost	Cost with OH
Chest X-ray	$275	365.75
IJ Line Placement	$3,122	4,152.26
Serum Pregnancy Test (local)	$77	102.41
Urine Pregnancy Test (local)	$25	33.25
Hospital Overnight Charge, per day	$2,040	2,713.20
BMT Evaluation - Initial	$584	776.72
Radiation Oncology Evaluation - Initial	$584	776.72
BMT Supportive Care Visits Post Discharge[a]	$872	1,159.76
BMT Supportive Care Infusions Post Discharge:		
Infusion (Initial Hour)	$573	762.09
Infusion (Additional Hour, each)	$195	259.35
Potassium oral or infusion, magnesium, RBCs, platelets, fluids as needed + pre-meds, as needed	at cost plus OH	at cost plus OH
Pulmonary Function Tests (Spirometry & DLCO) (Required for Local BMT Workup)	$220	292.60

CMV TESTING	Unit Cost	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8/ Month 2	Week 9	Week 10	Week 11	Week 12/ Month 3	Week 13
CMV Monitoring (Local)	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00
Institutional Overhead (28%) - OHSU	28.00%	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64
Divisional Assessment (5%) - Nephrology OH	5.00%	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40
Total		**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**

BK TESTING	Unit Cost	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8/ Month 2	Week 9	Week 10	Week 11	Week 12/ Month 3	Week 13
BK Monitoring (Local)	$342.00	CMV Only	$342.00	CMV Only	$342.00	CMV Only	$342.00	CMV Only	$342.00	CMV Only	$342.00	CMV Only	$342.00	CMV Only
Institutional Overhead (28%) - OHSU	28.00%	CMV Only	$95.76	CMV Only	$95.76	CMV Only	$95.76	CMV Only	$95.76	CMV Only	$95.76	CMV Only	$95.76	CMV Only
Divisional Assessment (5%) - Nephrology OH	5.00%	CMV Only	$17.10	CMV Only	$17.10	CMV Only	$17.10	CMV Only	$17.10	CMV Only	$17.10	CMV Only	$17.10	CMV Only
Total		**$0.00**	**$454.86**	**$0.00**	**$454.86**	**$0.00**	**$454.86**	**$0.00**	**$454.86**	**$0.00**	**$454.86**	**$0.00**	**$454.86**	**$0.00**

Week 14	Week 15	Week 16/ Month 4	Week 17	Week 18	Week 19	Week 20/ Month 5	Week 21	Week 22	Week 23	Week 24	Week 25	Week 26/ Month 6	Week 28
$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00
$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64
$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40
$250.04	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**

Week 14	Week 15	Week 16 Month 4	Week 17	Week 18	Week 19	Week 20/ Month 5	Week 21	Week 22	Week 23	Week 24	Week 25	Week 26/ Month 6	Week 28
$342.00	CMV Only	$342.00	CMV Only	$342.00	CMV Only	$342.00	CMV Only	$342.00	CMV Only	CMV Only	CMV Only	$342.00	CMV Only
$95.76	CMV Only	$95.76	CMV Only	$95.76	CMV Only	$95.76	CMV Only	$95.76	CMV Only	CMV Only	CMV Only	$95.76	CMV Only
$17.10	CMV Only	$17.10	CMV Only	$17.10	CMV Only	$17.10	CMV Only	$17.10	CMV Only	CMV Only	CMV Only	$17.10	CMV Only
$454.86	**$0.00**	**$454.86**	**$0.00**	**$454.86**	**$0.00**	**$454.86**	**$0.00**	**$454.86**	**$0.00**	**$0.00**	**$0.00**	**$454.86**	**$0.00**

Week 30/ Month 7	Week 32	Week 34/ Month 8	Week 36	Week 38	Week 39/ Month 9	Week 40	Week 42	Week 43/ Month 10	Week 44	Week 46	Week 48/ Month 11	Week 50	Week 52/ Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	$188.00	Month 10 falls between Weeks 42 and Weeks 44 testing.	$188.00	$188.00	$188.00	$188.00	$188.00	BK Only	BK Only	$188.00	BK Only	BK Only	$188.00	BK Only
$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	$52.64	Month 10 falls between Weeks 42 and Weeks 44 testing.	$52.64	$52.64	$52.64	$52.64	$52.64	BK Only	BK Only	$52.64	BK Only	BK Only	$52.64	BK Only
$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	$9.40	Month 10 falls between Weeks 42 and Weeks 44 testing.	$9.40	$9.40	$9.40	$9.40	$9.40	BK Only	BK Only	$9.40	BK Only	BK Only	$9.40	BK Only
$250.04	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$0.00**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$250.04**	**$0.00**	**$0.00**	**$250.04**	**$0.00**	**$0.00**	**$250.04**	**$0.00**

Week 30/ Month 7	Week 32	Week 34/ Month 8	Week 36	Week 38	Week 39/ Month 9	Week 40	Week 42	Week 43/ Month 10	Week 44	Week 46	Week 48/ Month 11	Week 50	Week 52/ Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19
$342.00	CMV Only	$342.00	CMV Only	CMV Only	$342.00	CMV Only	CMV Only	$342.00	CMV Only	CMV Only	$342.00	CMV Only	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00
$95.76	CMV Only	$95.76	CMV Only	CMV Only	$95.76	CMV Only	CMV Only	$95.76	CMV Only	CMV Only	$95.76	CMV Only	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76
$17.10	CMV Only	$17.10	CMV Only	CMV Only	$17.10	CMV Only	CMV Only	$17.10	CMV Only	CMV Only	$17.10	CMV Only	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10
$454.86	**$0.00**	**$454.86**	**$0.00**	**$0.00**	**$454.86**	**$0.00**	**$0.00**	**$454.86**	**$0.00**	**$0.00**	**$454.86**	**$0.00**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**

Month 20	Month 21	Month 22	Month 23	Month 24	Month 27	Month 30	Month 33	Month 36	Month 39	Month 42	Month 45	Month 48	Month 51	Month 54	Month 57	Month 60	TOTAL
BK Only	$188.00	BK Only	BK Only	$188.00	BK Only	$188.00	BK Only	$188.00	BK Only	$188.00	BK Only	$188.00	BK Only	$188.00	BK Only	$188.00	$9,400.00
BK Only	$52.64	BK Only	BK Only	$52.64	BK Only	$52.64	BK Only	$52.64	BK Only	$52.64	BK Only	$52.64	BK Only	$52.64	BK Only	$52.64	$2,632.00
BK Only	$9.40	BK Only	BK Only	$9.40	BK Only	$9.40	BK Only	$9.40	BK Only	$9.40	BK Only	$9.40	BK Only	$9.40	BK Only	$9.40	$470.00
$0.00	**$250.04**	**$0.00**	**$0.00**	**$250.04**	**$0.00**	**$250.04**	**$0.00**	**$250.04**	**$0.00**	**$250.04**	**$0.00**	**$250.04**	**$0.00**	**$250.04**	**$0.00**	**$250.04**	**$12,502.00**

Month 20	Month 21	Month 22	Month 23	Month 24	Month 27	Month 30	Month 33	Month 36	Month 39	Month 42	Month 45	Month 48	Month 51	Month 54	Month 57	Month 60	TOTAL
$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$342.00	$14,364.00
$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$95.76	$4,021.92
$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$17.10	$718.20
$454.86	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$454.86**	**$19,104.12**

RECIPIENT CTR-R

STUDY PROCEDURES / EVALUATIONS	Unit Cost	Screening	Day 0-TX	Day 1	Day 3	Week 1	Week 2	Week 4	Month 2	Month 3	Month 6	Month 9	Month 12	Month 18	Month 24	Month 30	Month 36	Month 42	Month 48	Month 54	Month 60
Medical History/Demographics		X																			
Informed Consent	X	X																			
Inclusion/Exclusion	X	X																			
Physical Exam (Initial - Nephrology)	$448	$448																			
Physical Exam Follow-up - Nephrology)	$228												$228		$228		$228				$228
Vital Signs (performed by study RN)		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ECG	$150	$150	$150										$150		$150		$150				$150
Serum Pregnancy Test (local)	$77	*Invoice*								*Invoice*	*Invoice*	*Invoice*	*Invoice*		*Invoice*		*Invoice*		*Invoice*		*Invoice*
Urine Pregnancy Test (local)	$25	*Invoice*								*Invoice*	*Invoice*	*Invoice*	*Invoice*		*Invoice*		*Invoice*		*Invoice*		*Invoice*
Venipuncture (performed by study RN)		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Central Lab:		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Safety Labs																					
Cytokine Panel																					
Immunoglobulins																					
Central DSA																					
HAMA Sample																					
T/B Cell Repertoire/Phenotyping																					
Vaccine Antibody Titers																					
Urinary Biomarkers																					

Donor Chimerism																					
Blood Biomarkers																					
Central Lab Processing & Shipping	$68	$68	$68	$68	$68	$68	$68	$68	$68	$68	$68	$68	$68	$68	$68	$68	$68	$68	$68	$68	$68
Local Labs:																					
Blood Group & HLA Typing	$875	*SOC/Invoice*																			
Viral Serology (HIV, Hep B, Hep C, Infectious Disease Panel)	$2,208	*SOC/Invoice*																			
CMV	*SOC*																				
BK Virus	*SOC*																				
Tacrolimus Levels	*SOC*			*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*	*SOC*
Kidney Transplant Procedure			*SOC*																		
Kidney Allograft Biopsy	$3,585		*SOC As Needed*								$3,585		*SOC*		$3,585		$3,585				
Research Pharmacy Dispensing Fee (immunosuppressive drugs)	$24		$24	$24	$24	$24	$24	$24	$24	$24	$24	$24	$24	$24	$24	$24	$24	$24	$24	$24	$24
Immunosuppressive drugs (provided by sponsor)																					
Adverse Events																					
Concomitant Medications																					
PI Oversight	$250	$250	$125	$125	$125	$125	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250
Data Entry Fee	$120	$180	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120
Visit Subtotal		**$1,096**	**$487**	**$337**	**$337**	**$337**	**$462**	**$462**	**$462**	**$462**	**$4,047**	**$462**	**$840**	**$462**	**$4,425**	**$462**	**$4,425**	**$462**	**$462**	**$462**	**$4,425**
Institutional Overhead (28%)		$307	$136	$94	$94	$94	$129	$129	$129	$129	$1,133	$129	$235	$129	$1,239	$129	$1,239	$129	$129	$129	$1,239
Divisional Assessment (5%)		$55	$24	$17	$17	$17	$23	$23	$23	$23	$202	$23	$42	$23	$221	$23	$221	$23	$23	$23	$221
Visit Total		**1,457.68**	**647.71**	**448.21**	**448.21**	**448.21**	**614.46**	**614.46**	**614.46**	**614.46**	**5,382.51**	**614.46**	**1,117.20**	**614.46**	**5,885.25**	**614.46**	**5,885.25**	**614.46**	**614.46**	**614.46**	**5,885.25**
TOTAL PER PATIENT	**33,750.08**																				

Invoiceable Patient Costs	Cost	Cost w/OH
Serum Pregnancy Test (local)	$77	$102.41
Urine Pregnancy Test (local)	$25	$33.25

BK TESTING	Unit Cost	Week 2	Week 4	Week 6	Month 2	Week 10	Month 3	Week 14	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19	Month 20	Month 21	Month 22	Month 23	Month 24	Month 27	Month 30	Month 33	Month 36	Month 39	Month 42	Month 45	Month 48	Month 51	Month 54	Month 57	Month 60	TOTAL
BK Monitoring (Local)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Overhead	SOC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.00**

Blood Typing		
86901: HB-LAB RH (D) TYPE	$34	
86850: HB LAB ANTIBODY SCREEN	$44	
86900: HB-LAB BLOOD GROUP, ABO	$49	
86832: HB-LAB FLOW HLA I AB ANTIGEN ID	$373	
86833: HB FLOW HLA CLASS II AB ANTIGEN D HIGH DEF QUAL	$375	
Total:	$875	

Viral Serology		
86703: HB-LAB ANTI-HIV	$27	
86704: HB-LAB HEPATITIS B CORE ANTIBODY	$26	
86706: HB-LAB HEPATITIS B SURFACE AB QUAL	$26	
87340: HB-LAB HEPATITIS B SURFACE ANTIGEN	$23	
86803: HB-LAB HEP C AB;W/PCR REFLEX	$26	
Total:	$128	

Apheresis		
38206: AUTOLOGOUS STEM CELL COLLECTION	$3,513	
36511: HB THER APHER - WBC	$1,901	
99213: HB FAC VISIT LEV 3	$293	
85025: HB-LAB CBC W/AUTO DIFF	$85	
Total:	$5,792	

Apheresis - Invoice as needed on day of apheresis collection - OH will be applied to all invoiceable costs				
	Cost	Cost w/OH		
80053: HB-LAB COMP METABLIC SET	$63.00	$84		
82330: HB-LAB IONIZED CALCIUM	$100.00	$133		
83735: HB-LAB MAGNESIUM PLASMA	$31.00	$41		
85007: HBOL CBC W/PLT W/AUTO DIFF	$81.00	$108		
96365: HB INFUSION INITIAL HR	$573.00	$762		
96366: HB INFUSION EA ADD HR	$195.00	$259		
Filgrastim	$329.00	$438	300mg injection	
Plerixafor 20mg/ml SDPF	$8,425.76	$11,206	per vial	
Tylenol 325mg tab PRN, per pill	$0.24	$0	per pill	
Calcium carbonate, 2 tabs PRN	$2.05	$3	per bottle of 150	
Ativan oral 0.5mg tab	$0.48	$1	per tab	
Oxycodone oral 5 mg tab	$4.30	$6	per tab	
Ondansetron	$2.80	$4	per tab	

IJ Line Placement	
HB INS NON-TUNNEL CV CATH >5YR	$1,611
HB CATHETER IJ CURVED DUAL LUMEN 11.5FR 6 XTP116IJC-2	$113
HB MICROPUNCTURE INTRODUCER SET 501-10.0-SC-NT-U-S	$171
HB WIRE AMPLATZ ULTRA STIFF 35-80 AUS G10168	$70
77001: HB FLUORO GUIDE CENTRAL VAD	$766
76937: HB US GUIDE VASCULAR ACCESS	$391
Total:	$3,122

Conditioning Medication Administration	
HB ONCOLOGY ROOM CHARGE	$2,040
HB CHEMO IV UP TO 1HR	$710
HB CHEMO IV EA ADD HR*	$284
*Invoice additional hours as needed	

Conditioning Medications - Invoice as needed - OH will be applied as applicable.			
	Cost	Cost w/OH	
Cyclophosphamide 500mg PWVL	$163.00	$217	
Fludarabine 25mg/ml SDPF 2ml	$47.00	$63	per vial
Mesna 100mg/ml MDV	$7.67	$10	

Total Body Irradiation	
99215: HB FAC VISIT LEV 5	$447
77470: HB SPECIAL TREATMENT PROCEDURE	$2,139
77370: HB SPEC MED RADIAT PHYSIC CONS	$895
77417: HB THER RAD PROT FILM(S)	$172
77412: HB RADIATION TREATMENT DELIVERY>1 MEV; COMP	$1,488
77331: HB TLD MEASUREMENT	$367
77336: HB PHYSICS CALIB/QA CHECK	$745
77321: HB SPEC TELE THERAPY PORT PLAN	$2,533
77300: HB BASIC RADIATION DOSIMETRY	$462
77263: PB-RADIATION THERAPY PLANNING-PRO FEE ONLY	$354
77290: HB RAD THER-CMPLX LOCALIZATION	$2,551
77014: HB CT PLACE RADIAT THER FIELDS	$1,011
Total:	$13,164

Cellular Therapy Lab - OH will be applied as applicable.			
	Cost	Cost w/OH	
38208: HB-LAB AUTO THAW OTHER	$1,080	$1,436	Invoice in the event rescue cell product is infused
96365: HB INFUSION INITIAL HR	$573.00	$762	Invoice in the event rescue cell product is infused
96366: HB INFUSION EA ADD HR	$195.00	$259	Invoice in the event rescue cell product is infused

Perioperative & Post-operative Medications - Invoice as needed			
	Cost	Cost w/OH	
Methylprednisolone (perioperative) 500 mg PWVL	$22	$29	per vial
Methylprednisolone (post-op Day 1) 125mg PWVL	$274	$365	per pack of 25
Methylprednisolone (post-op Day 2) 125mg PWVL	$274	$365	per pack of 25
Fluconazole 200mg Tab	$16	$21	per tab
Voriconazole 50 mg tab	$52	$69	per pill
Voriconazole 200 mg tab	$125	$167	per pill
Itraconazole 100mg Cap	$84	$112	per 20 pack
Levofloxacin 500mg Tab	$2	$3	per pill
Atovaquone 750mg/5ml UD cup	$28	$37	per cup
Letermovir 480mg Tab	$3,010	$4,003	per 14 pack

DONOR FCR-D

				Mobilization & Apheresis					Transplant & Post Transplant		
STUDY PROCEDURES / EVALUATIONS	**Unit Cost**	**Screening**	**BMT Screening (within 30 days of transplant - to be Invoiced)**	**Day 1**	**Day 2**	**Day 3**	**Day 4**	**Day 5**	**D0-TX**	**Month 6**	**Month 12**
Medical History/Demographics		X									
Informed Consent	X	X									
Inclusion/Exclusion	X	X									
Physical Exam (Initial - Nephrology)	$448	$448									
Physical Exam Follow-up - Nephrology)	$228									$228	$228
BMT Evaluation - Initial	Invoice	Invoice									
Vital Signs (performed by study RN)	X	X					X	X	X	X	X
ECG	$150	$150							$150		
Chest X-ray	$275			*Invoice*							
Venipuncture (performed by study RN)	X	X	X	X					X	X	X
Blood collection from VAD	$293							$293			
Central Lab		X		X					X	X	X
Safety Labs											
Immunoglobulins											
T/B cell repertoire/phenotyping											
Blood biomarkers											
Anti-recipient HLA antibody											
Vaccine antibody titers											
Donor Chimerism											
Central Lab Processing & Shipping	$68	$68		$68					$68	$68	$68
Local Lab											
Serum Pregnancy	$77	*Invoice*									
Viral Serology (HIV, Hep A, B, C, CMV, Infectious Disease Panel, EBV Panel)	$2,208		$2,208								

Safety Labs (CBC w/diff, comprehensive metabolic set, uric acid, phosphorus, LDH, direct bilirubin, lipid panel)	$438		$438								
aPPT & INR	$70		$70								
Donor Blood and HLA typing	$875	SOC/Invoice									
CD34 count and product	$310			$310			$310	$620			
Fibrinogen Level Quantitative	$25						$25				
aPPT & INR	$70			$70							
Mobilization/Apheresis Medications	*Invoice*			*Invoice*				*Invoice*			
Apheresis	$4,870							$4,870			
Cellular Lab Fees	$1,260							$1,260			
IJ Line Placement	$3,122			*Invoice*							
Kidney Transplant Procedure	*SOC*								*SOC*		
Filgrastim	*Invoice*			*Invoice*	*Invoice*	*Invoice*	*Invoice*	*Invoice*			
Filgrastim Administration (sub-cutaneous injection)	$135			$270	$270	$270	$270	$135			
Plerixafor	*Invoice*						*Invoice*				
Plerixafor Sub-cutaneous injection	$135						*Invoice*				
Adverse Events											
Concomitant Medications											
PI Oversight	$250	$250	$125	$125	$125	$125	$125	$250	$250	$250	$250
Data Entry Fee	$120	$180	$120	$120	$60	$60	$60	$120	$120	$120	$120
Visit Subtotal		**$1,096**	**$2,961**	**$963**	**$455**	**$455**	**$790**	**$7,548**	**$588**	**$666**	**$666**
Institutional Overhead (28%)		$307	$829	$270	$127	$127	$221	$2,113	$165	$186	$186
Divisional Assessment (5%)		$55	$148	$48	$23	$23	$40	$377	$29	$33	$33
Visit Total		**1,457.68**	**3,938.13**	**1,280.79**	**605.15**	**605.15**	**1,050.70**	**10,038.84**	**782.04**	**885.78**	**885.78**
TOTAL PER PATIENT	**21,530.04**										
Invoiceable Patient Costs	**Cost**	**Cost w/OH**									
Chest X-ray	$275	$365.75									
Plerixafor Sub-cutaneous injection	$135	$179.55									
Serum Pregnancy	$77	$102.41									
IJ Line Patient	$3,122	$4,152.26									

DONOR CTR-D (Screening Only)

STUDY PROCEDURES / EVALUATIONS	Unit Cost	Screening
Medical History/Demographics		X
Informed Consent	X	X
Inclusion/Exclusion	X	X
Physical Exam (Initial - Nephrology)	$448	$448
Vital Signs (performed by study RN)		
ECG	$150	$150
Venipuncture (performed by study RN)	X	X
Central Lab		X
Safety Labs		
Immunoglobulins		
T/B cell repertoire/phenotyping		
Blood biomarkers		
Anti-recipient HLA antibody		
Vaccine antibody titers		
Donor Chimerism		
Central Lab Processing & Shipping	$68	$68
Local Lab		
Serum Pregnancy	$77	*Invoice*
Blood Group & HLA Typing	$875	*SOC/Invoice*
Adverse Events		
Concomitant Medications		
PI Oversight	$250	$250
Data Entry Fee	$120	$180
Visit Subtotal		**$1,096**
Institutional Overhead (28%)		$307
Divisional Assessment (5%)		$55
Visit Total		**$1,458**
TOTAL PER PATIENT	**$1,458**	
Invoiceable Patient Costs	**Cost**	**Cost w/OH**
Serum Pregnancy Test (local)	$77	$102.41

								Infectious disease marker panel (required per FACT for apheresis):	Cost	
Blood Typing								80001895-HB-LAB TOXOPLASMOSIS IGG AB	70	
86901: HB-LAB RH (D) TYPE	$34							80001509-HB-LAB EARLY AG	92	EBV panel
86850: HB LAB ANTIBODY SCREEN	$44							80001510-HB-LAB NUCLEAR AG	92	EBV panel
86900: HB-LAB BLOOD GROUP, ABO	$49							80001511-HB-LAB VCA IGG	100	EBV panel
86832: HB-LAB FLOW HLA I AB ANTIGEN ID	$373							80001512-HB-LAB VCA IGM	100	EBV panel
86833: HB FLOW HLA CLASS II AB ANTIGEN D HIGH DEF QUAL	$375							80001521-HB-LAB HSV ANTIBODY	170	
Total:	**$875**							80002664-HB-LAB CMV	118	
								80002881-HB-LAB T CRUZI (CHAGAS DISEASE SCREEN)	75	
Apheresis			Apheresis - Invoice as needed on day of apheresis collection. OH will be applied to invoice items.					80002665-HB-LAB ANTI-HTLV I (CONF IF IND)	88	IDM panel
38205: HB STEM CELL HARVST, ALLOGENEIC	$2,591			Cost	Cost w/OH			80002666-HB-LAB ANTI-HTLV II (CONF IF IND)	97	IDM panel
36511: HB THER APHER - WBC	$1,901		80053: HB-LAB COMP METABLIC SET	$63.00	$83.79			80002671-HB-LAB ANTI HEP-B CORE ANTIBODY	84	IDM panel
99213: HB FAC VISIT LEV 3	$293		82310: HB-LAB CALCIUM PLASMA	$22.00	$29.26			80002673-HB-LAB ANTIHEP-CAB (CONF IF IND)	114	IDM panel
85025: HB-LAB CBC W/AUTO DIFF	$85		83735: HB-LAB MAGNESIUM PLASMA	$31.00	$41.23			80002678-HB-LAB ANTI-HIV I (CONF IF IND)	103	IDM panel
Total:	**$4,870**		85007: HBOL CBC W/PLT W/AUTO DIFF	$81.00	$107.73			80002675-HB-LAB STS (CONF IF IND)	90	IDM panel
			96365: HB INFUSION INITIAL HR	$573.00	$762.09			80002838-HB-LAB WNV NAT	229	IDM panel
			96366: HB INFUSION EA ADD HR	$195.00	$259.35			80002839-HB-LAB HIV-1 NAT	169	IDM panel
			Filgrastim	$329.00	$437.57	*300mg injection*		80002840-HB-LAB HCV-NAT	241	IDM panel
			Plerixafor 20mg/ml SDPF	$8,425.76	$11,206.26	*per vial*		80002676-HB-LAB HEP B SURFACE ANTIGEN	73	IDM panel
			Tylenol 325mg tab PRN, per pill	$0.24	$0.32	*per pill*		86787 HB-LAB-VARICELLA ZOSTER	103	
			Calcium carbonate, 2 tabs PRN	$2.05	$2.73	*per bottle of 150*		**Total IDM panel:**	**2208**	
			Ativan oral 0.5mg tab	$0.48	$0.64	*per tab*				
			Oxycodone oral 5 mg tab	$4.30	$5.72	*per tab*				
			Ondansetron	$2.80	$3.72	*per tab*				
Cellular Therapy Lab										
38215: HB-LAB ALLO HPCA BASIC PREP	$1,260									

Vaccine Name	NDC		PACK SIZE	COST*	MFG	COMMENTS
ACTHIB	49281-0545-03		5X1	$48.34	SANOFI	*Influenza Type B*
ADACEL	49281-0400-10		10X0.5	$325.25	SANOFI	*Tdap*
BEXSERO	58160-0976-20		10x0.5	$1,554.45	GSKVAC	*Meningococcal Group B*
BOOSTRIX	58160-0842-11		10x0.5	$388.99	GSKVAC	*Tdap*
DAPTACEL	49281-0286-10		10X0.5	$190.80	SANOFI	*Tdap*
ENGERIX-B ADULT	58160-0821-11		10x1	$547.31	GSKVAC	*Hepatitis B*
GARDASIL-9	00006-4121-02		10x0.5	$2,083.35	MERCKC	*HPV*
HAVRIX ADULT	58160-00826-52		10x1	$641.75	GSKVAC	*Hepatitis A*
HEPLISAV-B	43528-0003-05		5x0.5	$480.40	DYNAVA	*Hepatitis B*
VAQTA ADULT	00006-4841-41		10X1	$578.07	MERCKC	*Hepatitis A*
IPOL	49281-0860-10		1x5ml	$205.12	SANOFI	*Polio*
KINRIX	58160-0812-11		10x0.5	$482.94	GSKVAC	*Tdap*
MENACTRA	49281-0589-05		5x0.5	$474.41	SANOFI	*Meningococcal ACWY*
MMRII	00006-4681-00		10x1	$706.46	MERCKC	*MMR*
PENTACEL	49281-0510-05		5x1	$305.29	SANOFI	*Tdap*
PNEUMOVAX23	00006-4943-00		10x0.5	$990.88	MERCKC	*Pneumococcal-polysaccharide*
PREVNAR13	00005-1971-02		10x0.5	$1,903.30	MERCKC	*Pneumococcal-conjugate*
SHINGRIX	58160-0819-11		10x1	$1,424.87	GSKVAC	*Shingles*
TRUMENBA	00005-0100-05		5x0.5	$628.94	PFIZER	*Meningococcal Group B*
TWINRIX	58160-0815-52		10x1	$988.27	GSKVAC	*Hepatitis B*
VARIVAX	00006-4827-00		10x1	$1,357.20	MERCKC	*Varicella*
FLU VACCINE 2019-2020	49281-0419-10		10X1	$169.50	SANOFI	
**OH will be applied to all vaccine charges.*						

EXHIBIT C
ADMINISTRATIVE AND STUDY POINTS OF CONTACT

Refer to Section 17 ("Notices") of this Agreement.

EXHIBIT D
LETTER OF INDEMNIFICATION (LOI)/SUBJECT INJURY

To: INSTITUTION

TITLE OF CLINICAL TRIAL: A 5-year, randomized, controlled, multi-center study to assess the safety and efficacy of FCR001 cell-based therapy relative to tacrolimus plus mycophenolate mofetil in de novo living donor renal transplant recipients, and safety in FCR001 donors

CRO: CTI Clinical Trial Services, Inc.

STUDY NUMBER: FCR001A2301

1) Institution has entered into an Accelerated Clinical Trial Agreement (ACTA) with CRO to participate in the above sponsored Study. CRO has been engaged by Talaris Pharmaceuticals, Inc. [the "**Sponsor**") to arrange and administer this sponsored multi-center clinical trial.

2) Sponsor has delegated to CRO responsibility for the management and monitoring of this Study. Sponsor has further authorized CRO to bind Sponsor to its obligations within the Accelerated Clinical Trial Agreement for this Study executed between CRO and Institution. Sponsor accepts responsibility for its obligations contained in that Accelerated Clinical Trial Agreement.

3) Institution agrees to participate by allowing the Study to be undertaken utilizing such facilities, personnel and equipment as Institution may reasonably need for its conduct of the Study.

4) In consideration of such participation by Institution, and subject to paragraph 5 below, the Sponsor shall defend, indemnify, and hold harmless the Institution and its medical affiliates and affiliated hospitals, and each of their trustees, officers, directors, governing bodies, subsidiaries, affiliates, investigators, employees, IRB members, agents, successors, heirs and assigns (collectively referred to as "**Institution's Indemnitees**"), from and against any third party claims, loss, damage, cost and expense of claims (including reasonable attorney's fees) and suits ("**Claims**"), alleged to be caused by or arising from the conduct of the Study or use of the Study Drug or Study Device under this Agreement or from the use of the Study results, regardless of the legal theory asserted.

5) Sponsor shall have no obligation to provide such indemnification to the extent that such Claim is solely caused by Institution's Indemnitee(s)': (1) failure to adhere to and comply with all material and substantive specifications and directions set forth in the Protocol (except to the extent such deviation is reasonable to protect the rights,

safety and welfare of the Study subjects); (2) failure to comply with all applicable laws and regulations in the performance of the Study; or (3) if such claim is directly caused by the negligent acts or omissions of Institution's Indemnitees(s).

6) Subject to the limits and without waiving any immunities provided under applicable law (including constitutional provisions, statutes and case law) regarding the status, powers and authority of the Institution or the Institution's principal(s), Institution shall indemnify, hold harmless and defend Sponsor, its directors, officers, employees and agents, ("**Sponsor's Indemnitees**") from and against only those third party Claims to the extent directly attributable to Institution's negligence in its conduct of the Study. Notwithstanding the above, Institution shall have no obligation to indemnify Sponsor for any other Claims (including, but not limited to, infringement or product liability Claims).

7) The indemnified Party shall give notice to the indemnifying Party promptly upon receipt of written notice of a Claim for which indemnification may be sought under this Agreement, provided, however, that failure to provide such notice shall not relieve indemnifying Party of its indemnification obligations except to the extent that the indemnifying Party's ability to defend such Claim is materially, adversely affected by such failure. Indemnifying Party shall not make any settlement admitting fault or incur any liability on the part of the indemnified Party without indemnified Party's prior written consent, such consent not to be unreasonably withheld or delayed. The indemnified Party shall cooperate with indemnifying Party in all reasonable respects regarding the defense of any such Claim, at indemnifying Party's expense. The indemnified Party shall be entitled to retain counsel of its choice at its own expense. In the event a Claim falls under this indemnification clause, in no event shall the indemnified Party compromise, settle or otherwise admit any liability with respect to any Claim without the prior written consent of the indemnifying Party, and such consent not to be unreasonably withheld or delayed.

8) EXCEPT FOR THE PARTIES' OBLIGATIONS TO INDEMNIFY EACH OTHER AS STATED ABOVE, NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT, EVEN IF ADVISED OF THE POSSIBILITY OF THE SAME.

9) If a Study subject suffers an adverse reaction, illness, or injury which, in the reasonable judgment of Institution, was directly caused by a Study Drug or Study Device or any properly performed procedures required by the Protocol, Sponsor shall reimburse for the reasonable and necessary costs of diagnosis and treatment of any Study subject injury, including hospitalization, but only to the extent such expenses are not attributable to: (i) Institution's negligence or willful misconduct; or (ii) the natural progression of an underlying or pre-existing condition or events, unless exacerbated by participating in the Study.

10) Sponsor shall, at its sole cost and expense, procure and maintain commercial general liability insurance, clinical trial insurance and products liability insurance or equivalent self-insurance, unless otherwise indicated in an attachment, in amounts not less than $3,000,000 per occurrence and $10,000,000 annual aggregate. Such commercial general liability insurance, clinical trial insurance and products liability insurance or equivalent self-insurance shall provide contractual liability coverage for Sponsor's indemnification obligations herein.

11) Upon written request, Sponsor will provide evidence of its insurance policy or a program of self-insurance and will provide Institution with written notice of any material change in its coverage which would affect Sponsor's ability to meet its obligations under this Agreement. Sponsor's inability to meet its insurance obligation constitutes material breach of this LOI and the Accelerated Clinical Trial Agreement executed with the CRO for this Study.

12) During the Study and for at least two (2) years following the completion of the Study at all sites, Sponsor shall promptly provide Institution and Principal Investigator with the written report of any findings, including Study results and any routine monitoring findings in site monitoring reports, and data safety monitoring committee reports including, but not limited to, data and safety analyses, and any Study information that may (i) affect the safety and welfare of current or former Study subjects, or (ii) influence the conduct of the Study. Institution and/or Principal Investigator will communicate findings to the IRB and Study subjects, as appropriate.

13) Except as permitted in Article 10.3 in the ACTA, neither Institution nor Sponsor may use the name, trademark, logo, symbol, or other image or trade name of any other party or their employees and agents in any advertisement, promotion, or other form of publicity or news release or that in any way implies endorsement without the prior written consent of an authorized representative of the other party whose name is being used. Such approval will not be unreasonably withheld.

The authorized representatives have signed this Letter of Indemnification as set forth below.

Oregon Health & Science University

By: Kristen Baptiste Digitally signed by Kristen Baptiste Date: 2020.12.18 15:58:27 -08'00'

Kristen Baptiste, JD
Title: Manager – Clinical Trials Office, Contracting

Date: _____

Tala[illegible]ticals, Inc.

By: DocuSigned by: Scott Requadt 2F494CB32D9943F... _____

Name: Scott Requadt

Title: CEO

Date: 21-Dec-2020 | 13:11:37 PST

READ AND ACKNOWLEDGED

By: Douglas J. Norman Digitally signed by Douglas J. Norman Date: 2020.12.18 15:11:04 -08'00'

Douglas Norman, MD
Principal Investigator

Date: 12/18/2020